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DERWENT-WEEK: 199714

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TITLE: Bulking tuft string nylon carpet by heating to
recover latent crimp in pre-dried pile yarn - involves
passing carpet on holding system through oven heating
within specified temperature range by hot air jets and
cooling before release

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PATENT-FAMILY:

PUB-NO		PUB-DATE	LANGUAGE
PAGES	MAIN-IPC		
WO <u>9706393</u>	A1	February 20, 1997	E
018	F26B 019/00		
AU 9667199	A	March 5, 1997	N/A
000	F26B 019/00		
EP 843801	A1	May 27, 1998	E
000	F26B 019/00		

DESIGNATED-STATES: AU BR CA CN CZ JP MX PL RU TR UA US AT BE CH DE DK
ES FI FR
GB GR IE IT LU MC NL PT SE BE DE FR GB IT NL

CITED-DOCUMENTS: US 3921308; US 3962012 ; US 4270283 ; US 4578132 ;
US 4617218

APPLICATION-DATA:

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APPL-DATE		
WO 9706393A1	N/A	1996WO-US12864
August 8, 1996		
AU 9667199A	N/A	1996AU-0067199
August 8, 1996		
AU 9667199A	Based on	WO <u>9706393</u>
N/A		

EP 843801A1	N/A	1996EP-0927342
August 8, 1996		
EP 843801A1	N/A	1996WO-US12864
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N/A		

INT-CL (IPC): A46D001/00, B32B031/08 , F26B019/00

ABSTRACTED-PUB-NO: WO 9706393A

BASIC-ABSTRACT:

This method bulks a nylon carpet with tufts and backing. Creases are removed, and the carpet is held extended. It is heated to 90 -150 deg. C, and cooled below 60 deg. C before releasing it.

Pref. the carpet heating is carried out by directing hot fluid (air) in the cited temp. range, at the backing and pile, or just the pile. Pin clips hold the carpet edges. They recirculate in opposed paths in a pair of loops. Heated fluid is directed at the carpet in an oven, the clip arrangement carrying the carpet through, from entrance to exit. In an alternative, pins on a rectangular frame engage the carpet, and the frame is transported through.

USE - To bulk the tufts of a nylon carpet.

ADVANTAGE - A bonded tuft string carpet using pre-dyed pile yarn, the subject of an earlier patent application, is not exposed to heating after assembly, hence the latent crimp in the pile yarn filaments, is not recovered. The present invention supplies the need for a simple process to bulk the pile yarn at high line speeds, with minimal heat energy consumption. Practical process details and a suitable proprietary oven are discussed in the text. Steam may be used for heating; it has been observed that this causes fuzziness of the pile tuft tips, imparting additional springiness called scroup.

CHOSEN-DRAWING: Dwg.2/4

TITLE-TERMS: BULK TUFT STRING NYLON CARPET HEAT RECOVER LATENT CRIMP
PRE DRY

PILE YARN PASS CARPET HOLD SYSTEM THROUGH OVEN HEAT
SPECIFIED

TEMPERATURE RANGE HOT AIR JET COOLING RELEASE

DERWENT-CLASS: A23 A84 F05 P24 P73 Q76

CPI-CODES: A05-F01E1; A11-B02D; A12-D02;